United States Patent

Hutchinson

[15] **3,673,767**

[45] **July 4, 1972**

[54] APPARATUS FOR LOADING BAGS WITH ARTICLES

[72] Inventor: **Frank J. Hutchinson**, 613 Ridgedale, Garland, Tex. 75040

[22] Filed: **Nov. 24, 1969**

[21] Appl. No.: **879,230**

[52] U.S. Cl. **53/385**, 53/189

[51] Int. Cl. **B65b 43/36**

[58] Field of Search 53/385, 189

[56] **References Cited**

UNITED STATES PATENTS

3,468,100 9/1969 Rubel ..... 53/385 X

Primary Examiner—Travis S. McGehee
Attorney—Marcus L. Bates

[57] **ABSTRACT**

Apparatus for loading bags with articles, such as rolled newspapers, comprised of a platform, a retainer means for holding a bag supply relative to an air stream, and a blower having an outlet spaced apart from the retainer means. The bag supply is affixed to a bag supply pad which also serves as a baffle for directing air from the blower outlet into the uppermost bag so as to cause the bag to be inflated, whereupon the article can be inserted thereinto, and the bag then torn from the bag supply pad.

8 Claims, 10 Drawing Figures

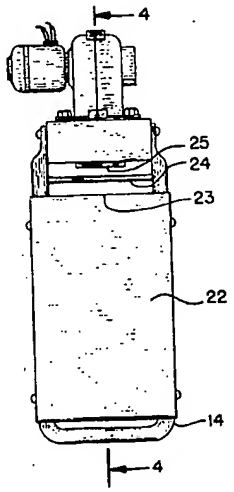


FIG. 1

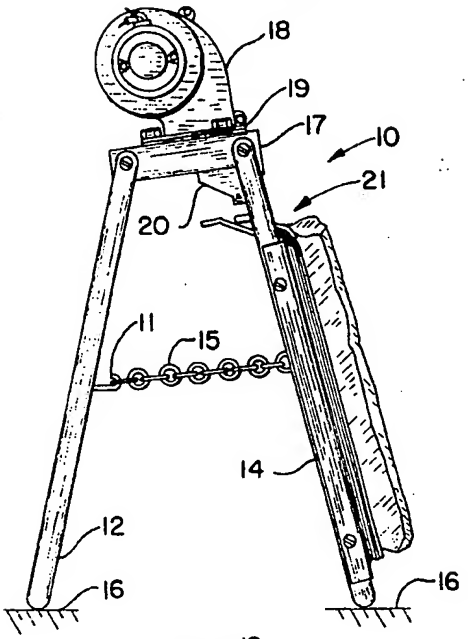


FIG. 2

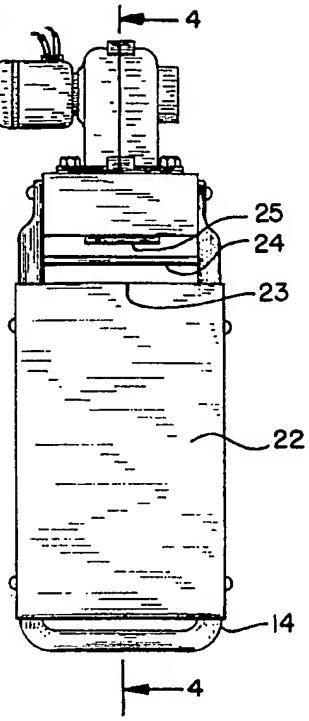


FIG. 4

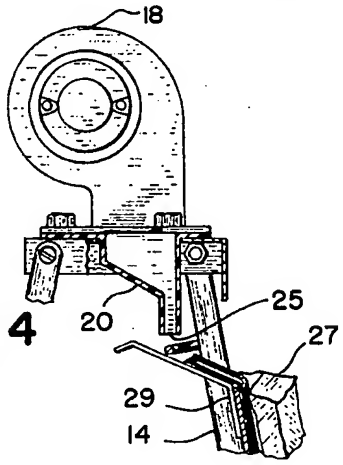
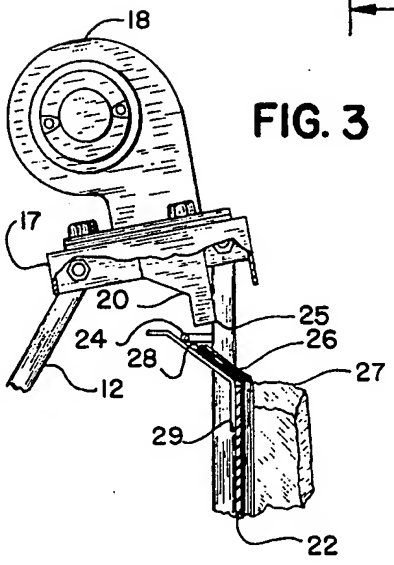


FIG. 3



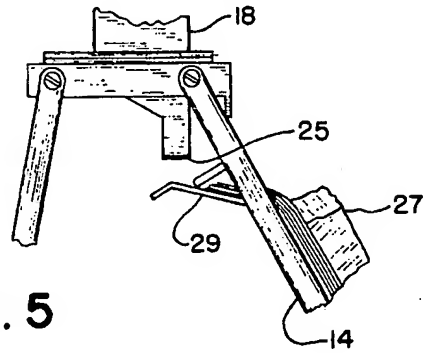


FIG. 5

INVENTOR
FRANK J. HUTCHINSON

BY
MARCUS L. BATES

FIG. 7

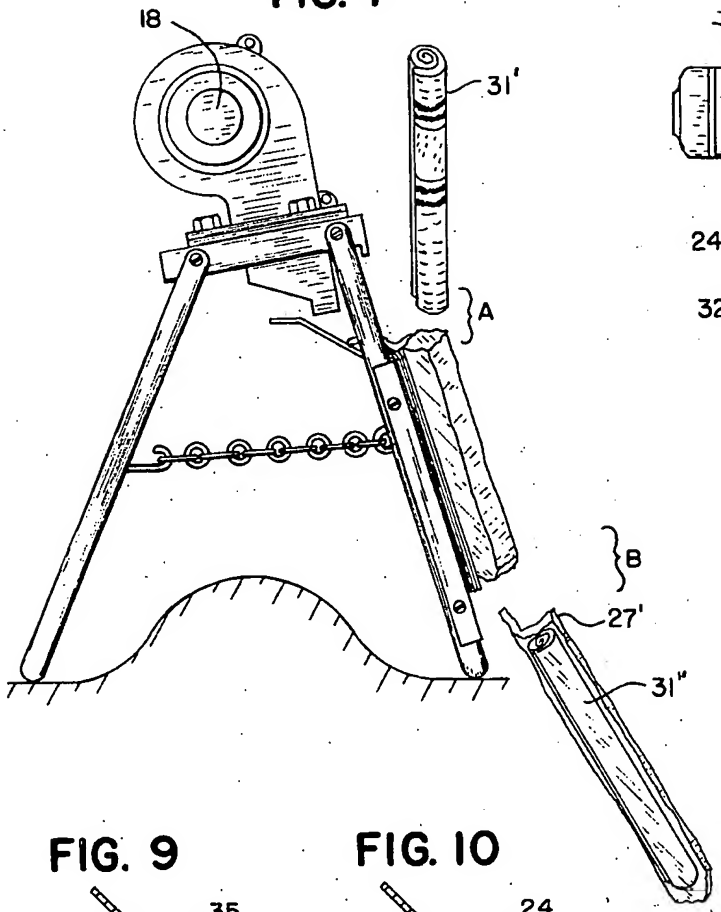


FIG. 6

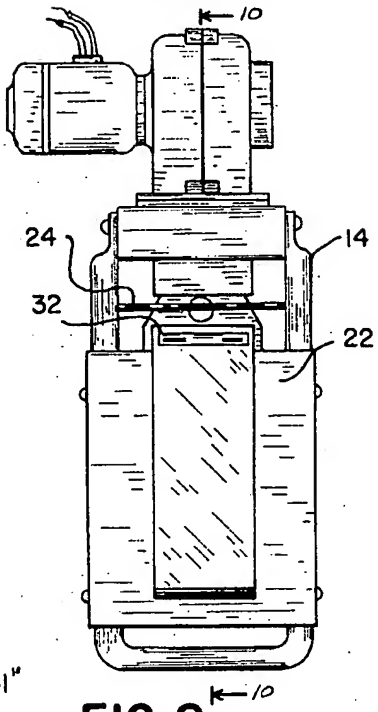


FIG. 8

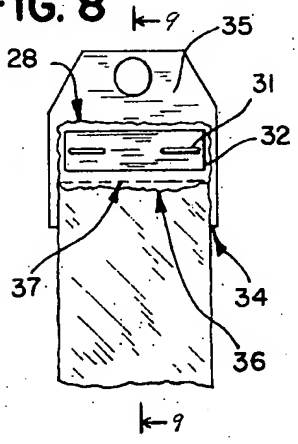


FIG. 9

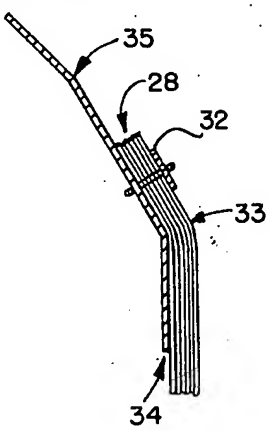
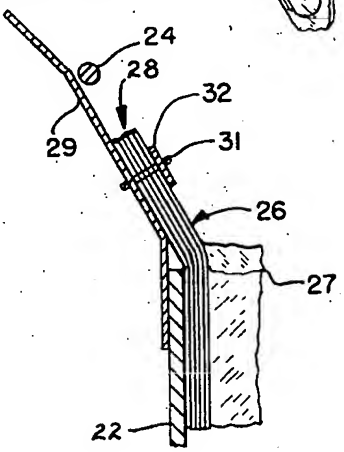


FIG. 10



INVENTOR

FRANK J. HUTCHINSON

BY

MARCUS L. BATES

APPARATUS FOR LOADING BAGS WITH ARTICLES

BACKGROUND OF THE INVENTION

Disposable thin walled flexible plastic bags attached to a bag supply pad in order to enable bags to be removed therefrom one at a time are known to those skilled in the art as evidenced by the patent to Winesett, U.S. Pat. No. 3,285,406. Bag dispensers of this type enable a rolled newspaper to be placed into the bag, the bag torn from the pad whereupon the open end of the bag can then be sealed as by tucking the loose ends back into the open end of the bag itself. Such an expedient is economical and desirable for protecting newspapers from the elements, especially in instances where the newsboy tosses the paper into the yard of the subscriber.

In suburban and rural areas newspapers are often delivered by automobile. In this instance it is customary for the newsboy to drive a vehicle and at the same time roll the individual papers into a cylinder whereupon the rolled paper is then secured with a rubber band or other fastener means in order that the paper can be tossed into the subscribers yard from the moving vehicle. Such an expedient enables economical delivery of a daily newspaper by young adults who are capable of responsible vehicle operation. During inclement weather the newspaper is often ruined or at least rendered undesirable for use. Accordingly, it is desirable to be able to quickly insert rolled newspapers into a protective covering, such as a thin, flexible, polyethylene bag or other protective enclosure means, while operating a motor vehicle.

SUMMARY OF THE INVENTION

This invention relates to a portable apparatus which can be placed in an automobile and used to expedite loading newspapers into thin flexible plastic protective coverings. The apparatus is comprised of a collapsible platform having a magazine which forms a bag supply retainer means and a blower which provides an airstream. The airstream is directed into the bag by a nozzle which is spaced apart from the platform. A plurality of upwardly opening stacked bags are supported by the platform and are aligned with the air stream, with each of the stacked bags being superimposed upon one another and attached to a bag supply pad. The bag supply pad forms a baffle to enhance air flow into the uppermost bag. Air from the blower is directed through the nozzle and into the opening of the uppermost bag thereby causing the bag to be inflated and thereafter maintained in an opened configuration. A rolled newspaper now can be conveniently and quickly inserted into the bag, the bag torn from the mounting pad and sealed, to thereby provide a protective covering for the newspaper.

It is therefore an object of this invention to provide improvements in apparatus for loading bags with articles.

Another object of the invention is to provide means for inflating the uppermost of a stack of bags so as to facilitate hand loading articles into bags.

Still another object of the present invention is the provision of an improved bag supply pad which holds a supply of stacked bags and acts as a baffle in order to direct an air stream into the uppermost bag to cause it to inflate with air.

A still further object of the present invention is the provision of improved apparatus for enabling rolled newspapers to be encased within a protective covering, and thrown from a moving vehicle.

These and other objects of the invention are attained by the provision of apparatus fabricated in a manner as set forth in the above abstract and summary, together with the remainder of this disclosure.

BRIEF DESCRIPTION OF THE DRAWING

Throughout the various figures of the drawing, like or similar numerals indicate like or similar elements, and wherein:

FIG. 1 is a side elevational view of apparatus for loading bags with articles, with the bag supply being included;

FIG. 2 is a front view of the apparatus seen in FIG. 1 with the bag supply removed;

FIG. 3 is an enlarged fragmentary partial cross-sectional view of the apparatus seen in FIGS. 1 and 2;

FIG. 4 is a fragmentary cross-sectional view taken along line 4—4 of FIG. 2 with the bag supply being included thereon;

FIG. 5 is an enlarged view showing part of the details seen in FIG. 1;

FIG. 6 is identical to FIG. 2, but with the bag supply being attached thereto;

FIG. 7 is similar to FIG. 1, with the invention being shown in operation;

FIG. 8 is an enlarged fragmentary representation of part of the apparatus seen in FIG. 6;

FIG. 9 is an enlarged cross-sectional view taken along line 9—9 of FIG. 8; and

FIG. 10 is an enlarged partial cross-sectional view taken along line 10—10 of FIG. 6.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Looking generally to the various figures of the drawing, the arrow at numeral 10 of FIG. 1 indicates apparatus, made in accordance with the present invention, for loading bags with articles. The apparatus includes a hook 11 attached to one of a pair of parallel spaced apart rear legs, one of which is seen at 12, and each of which is pivotally spaced apart from a pair of parallel spaced apart forwardly located legs, one of which is seen at 14. Chain 15 maintains the legs in the indicated relative position. The legs are bottom supported upon any suitable surface 16, which can be the floor board of an automobile. A base 17, journaled to each of the before mentioned legs by any suitable means such as bolts or hollow rivets, has a blower 18 mounted thereto. The motor driven blower provides means for producing an air flow or airstream and is connected to the base by a suitable mount pad or adapter 19. The motor blower can be a conventional 12 volt motor blower such as the motor and blower assembly associated with an ordinary automotive heater, the details of which are known to those skilled in the art. Mount pad or adapter 19 also connects plenum chamber 20 to the blower outlet, with the outlet being in the form of a nozzle 25.

Numeral 21 generally indicates the relative location of a retainer means to which there is removably affixed a multiplicity of stacked plastic bags, as will be discussed in greater detail later.

As particularly seen in FIGS. 2 and 3, a platform 22, comprised of a rectangular thin sheet of metal, is attached to each of the spaced apart forwardly directed legs by the indicated fastener means which can be in the form of bolts or screws. The platform forms part of the support means, and as seen in the drawings, includes an upper edge portion 23 which is spaced apart from the before mentioned nozzle with horizontal bar 24 being interposed therebetween to form a portion of the before mentioned retainer means. As seen in FIGS. 3–5 the journaled legs enables the air flow from the nozzle to be adjusted with respect to the platform so as to control the flow direction of the air stream with respect to the entrance or opening of the stacked bags.

A plurality of upwardly opening bags 26 are each superimposed upon the other, one of which is illustrated as being in the inflated position and having opening 27 aligned with the nozzle, with an upper terminal end 28 attached to a bag supply pad 29. As best seen in FIGS. 8 and 10, upper terminal end 28 of each bag is affixed to the bag supply pad by the illustrated spaced apart staples or fastener means 31 and reinforcement 32. The bag supply pad is bent in the illustrated manner at 33 and 35 to form a baffle for directing air towards the bag opening.

Each bag has a front and back opposed sheet connected by their longitudinally extending side edges. The back upper terminal end portion 28 extends beyond a free front edge portion

36 and is affixed to bag supply pad 29 by reinforcement 32 and fastener means 31. This particular bag design leaves a front edge portion 36 free to intercept the air stream from the blower so as to inflate the uppermost bag. A tear line 37 located between front edge portion 36 and back upper terminal end portion 28 permits the uppermost opened bag to be readily detached from the stack of remaining bags. Each bag is preferably fabricated in a manner as particularly seen in FIGS. 2 and 9 of the Winsett U.S. Pat. No. 3,285,406, issued Nov. 15, 1966.

OPERATION

In operation, the motor blower 18 is conveniently energized by utilizing the receptacle for a cigarette lighter which is usually provided on the dash-board of a vehicle. The apparatus receives a stack of bags in the illustrated manner of FIGS. 6, 7, 9, and 10 by inserting portion 35 of the baffle, or bag supply pad, under horizontal member 24 of the retainer means, and sliding edge portion 34 of the baffle under the platform, with the platform being received between the lowermost bag of the bag supply and the adjacent surface of the baffle in the illustrated manner. The direction of the air stream from the nozzle is next adjusted in accordance with FIGS. 3–5 so as to enable the baffle to cause the air flow to align with edge portion 36 of a bag so as to distend or inflate the uppermost bag with air as seen in FIGS. 1, 3, 5, 7, and 10. An article, such as a newspaper 31', can now conveniently be inserted into the opened bag before detachment of the bag from the pad, and the bag torn along its tear line 37, all in one continuous motion or operation. This action encloses the newspaper 31' within a bag 27'. The free end portions of the bag can be tucked into the upwardly opening end, if desired.

Since the newspaper now has a protective covering, it can be thrown onto the lawn of a subscriber with no deleterious affects resulting from the elements.

When the bag supply has been exhausted, the pad will usually fall to the floor, depending upon the location of the tear line, after which a new bag supply pad can be installed within the retainer means.

The bag size can be readily changed to accommodate various size newspapers by merely lifting the bag supply pad in an upward direction until edge portion 34 clears edge portion 23 of the platform, whereupon the pad is then withdrawn from the area between the retainer of the magazine and the edge portion 23 of the platform. The new bag supply pad can now be positioned in the bag supply retainer in the before described manner.

Since the apparatus can be placed adjacent the vehicle operator with the legs being supported on the front floor board of an automobile, with the spaced apart pairs of legs enclosing the transmission hump (FIG. 7), and since the apparatus inflates and dispenses one at a time polyethylene bags, it is referred to as a "Poly-Partner."

While the apparatus is herein described as being used for dispensing newspapers, it is also contemplated to load articles other than newspapers into the bag.

The low cost, adjustable, portable apparatus enables a vehicle driver to load newspapers into a bag and to toss the protected paper onto a lawn or into a yard while simultaneously operating a vehicle.

I claim:

1. Apparatus for loading bags with articles, with the apparatus supporting a plurality of upwardly opening stacked bags, with each bag having opposed front and back sheets connected together adjacent the side edges thereof with the back sheet extending beyond a free edge of the front sheet where it is connected to a bag supply pad which retains the bags for one at a time dispensing; said apparatus comprising:

a platform having an upper edge portion; spaced apart legs depending from and connected to said platform; a source of air which provides an airstream, means including a nozzle for directing the airstream, said nozzle being spaced apart from said platform so as to enable the airstream to be directed towards the upper edge portion of the platform;

a retainer means for holding the stacked bags on said platform; said retainer means including a horizontal member affixed to said legs and spaced apart from the upper edge portion of said platform; whereby:

the upper edge portion of the platform can be sandwiched in between the bag supply pad and the stacked bags, while the horizontal member urges the pad into a position relative to the airstream so as to cause air from the nozzle to be directed to the uppermost bag opening which is maintained in an inflated configuration to thereby enable articles to be inserted thereinto.

2. In combination with a plurality of stacked bags, wherein each bag has a front and back opposed sheet connected together adjacent the side edges to form an upwardly opening bag with the back sheet extending beyond a free edge portion of the front sheet, and with the upper marginal end of the back sheet being affixed to a bag supply pad wherein the bag supply pad retains the bags for one at a time dispensing; the improvement comprising:

a platform, a source of air, a nozzle for directing an air stream from the source of air in a direction generally towards a portion of the platform; a retainer means for holding the stacked bags on said platform; said bag supply pad forming a baffle for directing the airstream towards the opening of the uppermost of the bags;

said platform having an upper edge portion, spaced apart legs affixed to and depending from said platform; said nozzle being spaced apart from the uppermost edge portion of the platform;

said retainer means includes a member which is spaced apart from said upper edge portion of said platform, with the member being disposed between said legs;

said pad having an upper free end depending from the uppermost end of the stacked bags and a lower free end underlying the stacked bags, with the upper free end of said pad being received under said member, and with the stacked bags and said lower free end of the pad receiving at least part of said platform therebetween.

3. In an apparatus for loading bags with articles, including a plurality of stacked bags, with each bag having front and back opposed sheets connected adjacent their side edges with said back sheet extending beyond a free edge of said front sheet; and a bag supply pad for retaining said bags for one at a time dispensing; the improvement comprising:

a platform, a source of air which forms an air stream, a nozzle for directing the air stream; and a retainer means for holding the stacked bags on said platform;

said pad forming a baffle for directing the air stream from the nozzle towards the free edge of the uppermost of the plurality of bags so as to conduct the flow of air from the nozzle to the uppermost bag which is maintained in an inflated configuration to thereby enable articles to be inserted thereinto;

and further including means by which said nozzle is journaled in spaced apart relationship with respect to said platform; and

said retainer means being interposed between said platform and said nozzle;

said bag supply pad adapted to be held adjacent to said platform by said retainer means with said platform having a portion thereof which is interposed between said bags and said bag supply pad.

4. The apparatus of claim 1 and further including a base, said air source being in the form of a motor-blower, means affixing said motor-blower to said base;

journal means interconnecting said legs to said base to thereby enable the direction of the air stream to be changed relative to the bag end which forms the opening.

5. The apparatus of claim 4 and further including means by which said nozzle is journaled in spaced apart relationship with respect to said platform; and

said retainer means being interposed between said platform and said nozzle.

6. The apparatus of claim 2 and further including a mount pad, said air source being in the form of a motor-blower, means affixing said motor-blower to said mount pad; said platform forming a portion of said legs; and

journal means interconnecting said legs to said mount pad to thereby enable the direction of the air stream to be changed relative to the bag opening.

7. The improvement of claim 3 and further including a base, said air source being in the form of a motor-blower, means affixing said motor-blower to said base;

journal means interconnecting said legs to said base to thereby enable the direction of the air stream to be changed relative to the bag end which forms the opening.

8. The improvement of claim 3 and further including a mount pad, said air source being in the form of a motor-blower, means affixing said motor-blower to said mount pad; said platform forming a portion of said legs; and

journal means interconnecting said legs to said mount pad to thereby enable the direction of the air stream to be changed relative to the bag opening.

* * * * *